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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,246	03/19/2001	John P. Wong	032885-001	8377
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EXAMINER ALAUBAIDI, HAYTHIM J				
ART UNIT		PAPER NUMBER		
2161				

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,246

Applicant(s)

WONG, JOHN P.

Examiner

Haythim J. Alaubaidi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is a Non-Final Office Action in response to the amendment brief filed on October 18, 2004.
2. Claims 1-16 are presented for examination following the amendment of filed on October 18, 2004.

Priority

3. Applicant's claim for the benefit of an earlier filing date of the provisional application under 35 U.S.C. §119(e) is acknowledged. The priority date awarded to the Applicant is March 17, 2000.

Response to Arguments

4. Applicant's arguments, see the amendment brief filed on October 18, 2004 with respect to the rejection(s) of claim(s) 1-12, 14 and 15 have been fully considered and are persuasive. Therefore, the previous rejection has been withdrawn. However, upon further search and consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wayne Duso (U.S. Patent No. 6,625,750 and Duso hereinafter) in view of Nobuyuki Enoki (U.S. Patent No. 5,873,085 and Enoki hereinafter).

Regarding Claims 1-3, 7 and 9, Duso discloses:

mounting components of each of said two physical file systems in a single directory (Col 10, Lines 39-48); and

a virtual file system data structure containing elements which respectively correspond to each of the mounted components (Col 9, Lines 47-65; see also Col 10, Lines 48-50).

Duso reference discloses all of the claimed subject matter set forth above, except it does not explicitly indicate the step of each of said elements having an application interface data structure with two associated pointers that respectively point to application interface data structure of a corresponding component in each of said two physical file system. However Enoki teaches wherein each of said elements (files)¹ having an application interface data structure with two associated pointers that respectively point to application interface data structure of a corresponding component in each of said two physical file system (servers) (Figure No's 3, 8, 11, 15-18, 30, 32,

¹ Please note that the Examiner is interpreting the "element" to be a "file" according to Figure No. 4 of the current Application, where the files contains two pointers, such as Element No. 231-233; please see also the Specification of the current application, Pages 19-20, section No. 2. i.e. "each element is either a file or a directory".

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37a-37b and 46a-46b and corresponding text; see also Col 3, Lines 9-16; see also

Enoki's Abstract), i.e.

“is that a virtual file management apparatus operating in at least one of said plurality of servers is provided that has: a management table which manages files stored on said plurality of servers by using virtual file identifiers, and in which a server name of a server where real data is stored and a real file identifier in said server are stored as a set for each of said virtual file identifiers; a receiving section which receives a file access request from each of said terminals”.

Given the intended broad application of Duso's system, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Duso with the teachings of Enoki to associate pointers to components (files) in other file systems to reduce network workload and improve the system response to the clients (Enoki, Col 2, Line 67 through Col 3, Line 3).

Regarding Claims 4 and 10, Duso discloses:

mounting components of each of said two physical file systems in a single directory (Col 10, Lines 39-48); and

such that a copy of each component is stored in each of said two physical file system (Col 10, Lines 39-50); and

real-time in response to said request (Col 10, Lines 50-55).

Duso reference discloses all of the claimed subject matter set forth above, except it does not explicitly indicate the step of receiving a request to perform a write operation

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on one of said components; and performing said write operation on both copies of said one component in said two physical file systems. However Enoki teaches receiving a request (Col 28, Lines 9-14) to perform a write operation² on one of said components (Col 15, Lines 17-26; see Col 15, Lines 17-26) and performing said write operation on both copies of said one component in said two physical file systems (Col 28, Lines 15-27).

Given the intended broad application of Duso's system, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Duso with the teachings of Enoki to receive a request to perform a write operation on one of said components; and performing said write operation on both copies of said one component in said two physical file systems to minimize the risk of error and data lose by mirroring the data and creating a backup file.

Regarding Claim 5, Enoki discloses wherein said request designates said one component, on which the write operation is to be performed, by means of a path name that is common to both of said physical file systems (Col 3, Lines 9-30, i.e. virtual file identifier (path); see also server name (path); see also Col 15, Lines 17-26)³

² Please note that the "write operation" can also be interpreted as the "record" feature of the real-time access to the CMFAP (Col 10, Lines 51-59) also it reads on the write operation of Enoki Col 15, Lines 17-26.

³ Please note that the Examiner is interpreting the feature of "that is common to both of said physical file systems" as in for example Figure No. 37(b); the file with Server ID 102 for example points or includes the path name to both copies of the file in both locations (the virtual copy and the real copy at the server).

Regarding Claim 8, Enoki discloses single mount point for access to the components either of said physical file systems (Enoki, Figure No. 30 and corresponding text; see also Col 1, Lines 30-37).

7. Claim 6, is rejected under 35 U.S.C. 103(a) as being unpatentable over Wayne Duso (U.S. Patent No. 6,625,750 and Duso hereinafter) in view of Nobuyuki Enoki (U.S. Patent No. 5,873,085 and Enoki hereinafter) and further in view of Sarit Mukherjee (U.S. Patent No. 6,466,978 and Mukherjee hereinafter).

Regarding Claim 6, the combination of both Duso and Enoki discloses all of the claimed subject matter set forth above including the feature of lock management (Duso, Col 7, Lines 3-8) except they don't explicitly indicate the step of acquiring a lock for each copy of said one component, and inhabiting said write operations until both locks can be acquired. However, Mukherjee teaches acquiring a lock for each copy of said one component, and inhabiting said write operations until both locks can be acquired (Col 17, Line 56 through Col 18, Line 15).

Given the intended broad application of both Duso and Enoki's systems, It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of both Duso and Enoki with the teachings of Mukherjee to acquire a lock for each copy of said one component, and inhabiting said write operations until both locks can be acquired in order to insure data integrity (Mukherjee, Col 18, Lines 17-18).

8. Claims 11-14, is rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuyuki Enoki (U.S. Patent No. 5,873,085 and Enoki hereinafter) in view of Steven Soltis (U.S. Patent No. 6,697,846 and Soltis hereinafter).

Regarding Claims 11, 12, 14 and 15, Enoki discloses:

a first server (Figure No 30, Element No. 3001a) having a first local file system (Figure No 30, Element No. 3004a) and a first physical storage device (Figure No. 30 and corresponding text; see also Col 1, Line 42, i.e. file stored on a server; see also Col 2, Lines 29-31); and

a second server (Figure No 30, Element No. 3001b) having a second local file system (Figure No 30, Element No. 3004b) and a first physical storage device (Figure No. 30 and corresponding text; see also Col 1, Line 42, i.e. file stored on a server; see also Col 2, Lines 29-31); and

first server and second server to provide a single point of access for components stored in each of said first and second local file systems (Figure No 30, and corresponding text).

Enoki reference discloses all of the claimed subject matter set forth above, except it does not explicitly indicate a client system having a virtual file system which mounts an imported file system. However, Soltis discloses a client system having a virtual file system which mounts an imported file system (Soltis, Figure No. 2, Element

No. 122 and corresponding text and Figure No. 4 and corresponding text; see also Col 9, Line 65 through Col 10, Line 12).

Given the intended broad application of Enoki's system, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Enoki with the teachings of Soltis to include client system having a virtual file system which mounts an imported file system in order to provide access to files and directories much larger than what the client can store on its local storage devices.

Regarding Claims 13 and 16, wherein each of said elements (files)⁴ having an application interface data structure with two associated pointers that respectively point to application interface data structure of a corresponding component in each of said two physical file system (servers) (Figure No's 3, 8, 11, 15-18, 30, 32, 37a-37b and 46a-46b and corresponding text; see also Col 3, Lines 9-16; see also Enoki's Abstract), i.e.

"is that a virtual file management apparatus operating in at least one of said plurality of servers is provided that has: a management table which manages files stored on said plurality of servers by using virtual file identifiers, and in which a server name of a server where real data is stored and a real file identifier in said server are stored as a set for each of said virtual file identifiers; a receiving section which receives a file access request from each of said terminals".

⁴ Please note that the Examiner is interpreting the "element" to be a "file" according to Figure No. 4 of the current Application, where the files contains two pointers, such as Element No. 231-233; please see also the Specification of the current application, Pages 19-20, section No. 2. i.e. "each element is either a file or a directory".

Other Prior Art Made of Record

9. Matena et al. (U.S. Patent No. 6298390) discloses a Method and apparatus for extending traditional operating systems file systems;

Domenikos et al. (U.S. Patent No. 6115741) discloses a systems and methods for executing application programs from a memory device linked to a server; and

Cramer et al. (U.S. Patent No. 5946685) discloses a global mount mechanism used in maintaining a global name space utilizing a distributed locking mechanism.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Points of Contact

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haythim J. Alaubaidi whose telephone number is (571) 272-4014. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (571) 272-4023.

Any response to this office action should be mailed to:

The Commissioner of Patents and Trademarks, Washington, D.C. 20231 or telefax at our fax number (703) 872-9306.

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Hand-delivered responses should be brought to the Customer Service Window of the
Randolph Building at 401 Dulany Street, Alexandria, VA 22314

Haythim J. Alaubaidi

Patent Examiner
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Art Unit 2161
April 3, 2005

Frantz Coby
FRANTZ COBY
PRIMARY EXAMINER